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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,307	07/22/2003	Andrew Joy	TI-32316	7812
23494	7590	10/16/2006	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			TRAN, KHAI	
			ART UNIT	PAPER NUMBER
			2611	

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,307

Applicant(s)

JOY ET AL.

Examiner

KHAI TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8, 15 and 27 is/are rejected.
- 7) ☒ Claim(s) 1-7, 9-14, 16-26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/6/2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figures 1-5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 1-7, 9-14 and 16-26 are objected to because of the following informalities: Appropriate correction is required.

The word "said" should be deleted in the lines 11, 12, 19, 21 of claim 1; line 10 of claim 2; line 7 of claim 6; line 14 of claim 12; lines 9, 10, 15, 17 of claim 16; line 10 of claim 17; line 6 of claim 20; line 1 of claim 21; line 14 of claim 24.

The dependent claims above are also objected.

Claim Rejections - 35 USC § 112

3. Claims 8, 15, 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 8, line 3, the term "a, or the, fourth clock signal" is not clear.

Regarding claim 15, line 3, the phrase "each phase adjustment circuit is a clock adjustment circuit as claimed in any one of claims 1 to 11" is indefinite because each phase adjustment circuit is a clock adjustment circuit is not claimed in any one of claims 1 to 11.

Regarding claim 27, line 3, the phrase "claims 61 to 68" is not clear since there is no preceding claims 61 to 68.

Allowable Subject Matter

4. Claims 8, 15, 27 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: none of the prior art of the record discloses or suggests that a clock aligning circuit comprising: phase comparison means for providing an indication of whether the closest edge of a particular kind of the first clock signal to an edge of a particular kind of the second clock signal is earlier or later than that edge, the kinds of edges being positive going or negative going and the ones of the first and second clock signals being of the same kind or of different kinds; and third clock signal providing means, for providing the third clock signal from the second clock signal, comprising latching means, for latching the second clock signal, operable to latch and delay the second clock signal by such an amount, dependent on the indication from the phase comparison means, that the resulting third clock signal has an edge, either positive or negative going, aligned with the closest edge of the first clock signal as recited in claims 1 and 16; the

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circuit comprising a plurality of phase adjustment circuits, each for so producing the word clock for a respective one of the data streams in response to a word clock for another one of the data streams and the bit clock for its own data stream that the word clock produced has an edge of a particular kind aligned with the edge of a particular kind of the bit clock for its own data stream that is closest to an edge of a particular kind of the word clock for the other data stream, wherein one of the data streams is a master data stream and the circuit comprises means for producing the word clock for that data stream from its bit clock without reference to the phase of the word clocks of the other data streams as recited in claims 12 and 24.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ishida (U.S. Pat. 5,506,796) discloses a digital signal processing circuit.

Kim et al (US 2002/0196885 A1) disclose determining phase relationships using digital phase values.

Migita (U.S. Pat. 6,526,106) discloses a synchronization circuit.

Lysdal et al (U.S. Pat. 6,973,151) disclose dynamic phase aligning interface.


Dedic et al (U.S. Pat. 7,065,168) disclose a jitter reduction.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAI TRAN whose telephone number is (571) 272-3019. The examiner can normally be reached on 7:00AM - 4:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JAY PATEL can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


KHAI TRAN
Primary Examiner
Art Unit 2611

KT
October 10, 2006